Solving Finance Problems

Investments involve three things:

amount of money you invest (principal)
rate of investment (percent: written in decimal form)
actual yearly interest in dollars (interest, income, return)

Formula: **I = PRT** Interest = Principal x Rate x Time

Ex1: Mr. Silver invested 7,000 at 10% interest rate for 5 years. How much did he have at the end of that time?

I = PRT (We are solving for **I**)
I = (7,000)(.10)(5)
I = (700)(5)
I = 3,500

Mr. Silver's return after 5 years at 10% was **$3,500**.

Ex2: Joann Griswold invested $33,500 part at 6.5% and part at 7.3%. In one year a total interest of $2,273.50 was earned. How much was invested at each rate?

Let x = amount in dollars invested at 6.5%
33,500 - x = amount in dollars invested at 7.3%

I = PRT + PRT
2,273.50 = (x)(.065)(1) + (33,500-x)(.073)(1)
2,273.50 = .065x + 2,445.5 - .073x
2,273.50 = 2,445.5 - .008x
-172 = -.008x
21,500 = x

Ms. Griswold invested **$21,500** at 6.5% and **$12,000** at 7.3%.

Sample Problems:

1. Bill inherited two different stocks whose yearly incomes were $2,100. The total apprised values of the stocks were $40,000 and one was paying 4% and one was paying 6% per year. What was the value of each stock per year?

2. A taxpayer's income tax was $2,048. His city tax was $615 more than his county tax. His total taxes amount to $2,969. How much was his county tax? (total taxes equal: income tax, city tax and county tax)

3. When Mr. Jones sold his house recently, he received $300,000 for it that was 20% more than he paid for it 3 years ago. What was the original price?

4. Mark Berry wishes to invest a sum money so that the interest each year would pay for his son's college expenses. If the money is invested at 8% and the college expenses are $3,000 per year, how much should Mark invest?

Answers:

1. $15,000 at 4% and $2,500 at 6%
2. 153
3. $250,000
4. $37,500